

REMARKS

[0001] Claims 30-44 are all the claims presently pending in this application. Claims 30, 35 and 40 have been amended to more particularly define the claimed invention.

[0002] Applicant respectfully submits that entry of the currently amended claims is proper because the currently amended claims will either place the application in condition for allowance or in better form for appeal. Applicant further respectfully submits that no new matter is added to the currently amended claims, nor has the scope of the pending claims changed. Accordingly, no new issues are raised that necessitate a further search of art. Applicant respectfully traverses the rejections based on the following discussion.

I. OBJECTION TO THE SPECIFICATION

[0003] Claim 30 is objected to and Applicant has amended claim 30 to eliminate an antecedent basis issue in a manner believed fully responsive to all points raised by the Examiner. Applicant respectfully requests that the Examiner withdraw this object in light of Applicant's claim amendment.

II. THE PRIOR ART REJECTION

The 35 U.S.C. § 102(b) Rejection over Rostoker

[0004] Claims 30-44 stand rejected under 35 U.S.C. §102(b) as being anticipated by Rostoker, U.S. Pat. No. 5,662,768, (hereinafter "Rostoker").

[0005] Applicant's traverse the Examiner's rejection since, among other reasons, Rostoker discloses forming trenches with undulating profiles by first implanting multiple vertically

separated layers of dopant in a substrate beneath a region that selectively attacks the highly doped substrate regions to form undulations trench sidewalls corresponding to the positions of the implanted regions. Applicant's claimed invention includes an opening in the upper surface of the substrate having a rectangular portion originating with an intersection of the upper surface and the opening having a greater horizontal direction than another rectangular portion, in claims 30 and 35, and a first portion located below the upper surface having a greater horizontal direction than another portion below the first portion being bounded on two sides by a mask material, in claim 40.

[0006] More specifically, Applicant submits, that Rostoker does not teach or suggest:

[0007] *"a first rectangular portion originating with an intersection of said upper surface and said opening,...wherein said first rectangular portion has larger dimensions in a horizontal direction than said second rectangular portion," of Applicant's independent claim 30, and similarly, "wherein said first rectangular portion has larger dimensions in a horizontal direction than said second rectangular portion and said third rectangular portion," of Applicant's independent claim 35; and*

[0008] *"a first rectangular portion located completely below and having no portion thereof coincident with said upper surface, and a second rectangular portion located below said first rectangular portion and bounded on two sides by a mask material deposited on said substrate material, wherein said first rectangular portion has larger dimensions in a horizontal direction than said second rectangular portion," of Applicant's independent claim 40.*

[0009] The Examiner alleges that Rostoker discloses Applicant's claimed invention by equating Rostoker's lateral indentation 16 with Applicant's first rectangular portion, and Rostoker's trench sidewall 14 with Applicant's second rectangular portion.

[0010] With respect to Applicant's independent claims 30 and 35, Rostoker fails to disclose the lateral indentation 16 originating with the intersection of the upper lateral surface of spacers 12 and the opening neck region 18. Additionally, Rostoker discloses the lateral indentation 16 being larger than the rectangular section at the opening of neck region 18.

[0011] Furthermore, with respect to Applicant's independent claim 40, Rostoker fails to disclose the trench sidewall 14 bounded on two sides by a mask material deposited on said substrate material 4. Rostoker teaches away from Applicant's claimed invention where no mask material is required to form the lateral indentations 16 since the neck region 18 boars through the prepared implant regions 10 to form the vertical trench including the combination of trench sidewalls 14 and indentations 16.

[0012] In summary, Rostoker discloses no rectangular regions originating with an intersection of said upper surface and an opening where a second rectangular region is smaller in a horizontal direction, per Applicant's claims 30 and 35, and where a second rectangular portion is bounded on two sides by a mask material deposited on a substrate, per Applicant's claim 40.

[0013] Therefore, Applicant respectfully requests the Examiner to reconsider and withdraw this rejection since the alleged prior art reference to Rostoker fails to teach or suggest each element and feature of Applicant's claimed invention.

III. FORMAL MATTERS AND CONCLUSION

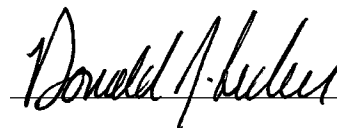
In view of the foregoing, Applicant submits that claims 30-44, all of the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Date: November 10, 2008

Respectfully Submitted,



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